Online Health Information Seeking Behaviors Among the Thai Elderly Social Media Users

Jantima Kheokao[1] Kanyarat Ubolwan[2]
Kitsanaporn Tipkanjanaraykha[3] Unya Plodpluang[4]

Abstract

This cross sectional study aimed to describe online/social media use behaviors and to study online health information seeking of the 1,237 Thai elderly netizen. Questionnaire was used to collect data on demographical profiles, internet and online social media uses and online health information seeking behaviors of the respondents. Data were analyzed using descriptive statistics; frequency distribution, percentages, mean and standard deviation. The findings revealed that: 1) The respondents were living in the central region (509, 41.1%), female (740, 59.8%), aged between 60 -69 years old (899, 72.7%) with a mean age of 66.92 years (SD = 5.53), elementary schoolers (349, 28.2%), married (781, 63.1%), having monthly income less than 5,000 baht (500, 40.4%) from the pension (330, 26.7%), and having chronic diseases (704, 56.9%); 2) Online social media use behaviors, it was found that most of respondents used personal smart/mobile phone to get online connection (932, 75.3%), use internet/online social media less than 1 hour a day (517, 41.8%). Line was used by most respondents (1,060, 85.7%), age ranged from 60-69 years reported that they used the online media/social media higher than other aged groups. It was also found that most of respondents of every education level, monthly income level, and marital status used Line higher than other online media/social media; 3) Online health information seeking of the elderly, the top three of contents regularly searched from the internet were healthy lifestyle (141, 11.4%), treatments (136, 11.0%), and medication (123, 9.9%). Opinion towards health information seeking behaviors and trust of health information sources revealed that the respondents reported the highest average mean score on it's hard to know which ones to follow (mean=1.88 (SD = 0.825) which was at low level.

Keywords: Thai elderly netizen, social media uses, Online health information seeking

---

[1] PhD., University of the Thai Chamber of Commerce, email: jantima.kheokao@gmail.com

[2] Boromarajonani College of Nursing Saraburi, email: kanyarat@bcns.ac.th

[3] Boromarajonani College of Nursing Bangkok, email: kitsanaporn.t@bcn.ac.th

[4] Boromarajonani College of Nursing Chakrirat, email: anya_p12@hotmail.com

Received: 01/02/2019; Revised: 16/03/2019; Accepted: 31/05/2019

Background of the Study

The Internet and social media via smartphone has become an important means for disseminating health information and aiding health decision making (Xie, 2009) due to its availability of a wide range of information, reduced cost, increased convenient access, ability to overcome time and space, real time interaction, tailoring of content, and anonymity (Rice, 2006) and can be used for information sharing, providing educational resources, outreach links to society and engaging people to people and organization (Williamson, 2013).

The Pew Research Center's Internet and American Life Project indicates that 72% of internet users have used the World Wide Web to search for health information (Fox & Duggan, 2013) and health information seekers are increasingly using online health for a diverse range of health-related subjects (Weaver 2018) at the point of need differently according to individual ability to locate, evaluate and use online health information which may be influenced by an individual's level of health literacy and eHealth literacy. Those with advanced eHealth literacy skills may utilize more efficient online search strategies and identify higher quality health information resources (Quinn, Bond & Nugent, 2017). Although some elderly has ability to locate online health information but at a slower rate and the information received was interpreted or understood by using their previous experiences (Huang, Hansen, & Xie, 2012).

The survey of Thailand’s National Bureau of Statistics indicated that Thai people have an increasing proportion of internet users in all age groups. Although it was found that the 46-64 age groups have the lowest use of online media, however, social network is important to well-being of all older people. The elderly used mobile phones to connect with a Facebook, Line application, Instagram, YouTube and others (Chaichuay, 2017); used internet for 1-2 hours a time and a couple of times per week (Rattanawarang, 2015). The Internet has become an important source of health information for elderly people in Thailand (Chaudhuri, White, Thompson, & Demiris, 2013; NIDA Poll, 2017).

Although statistics indicated that people who use social networks are mainly the youth however it was found that the number of users of social networks among the elderly was increased (Tayati, Disathaporn, & Onming, 2017). Thailand will become ageing society in full stream in less than 20 years from now, common ICT devices and platforms are planned for embracing the elderly lives and works at a certain level. Smart public service to serve aged consumers’ attention as well as promotion of innovated devices and applications are made specifically to serve their special needs. ICT development strategy which addresses obviously over human capital development during the five year plan will pave a distinctive channel to accommodate the elderly’s ICT literacy for improving their quality of life and work extensively (Sunkpho, Khaemasunun, & Tubtimhin, 2014). ICT enabled

innovations and services for e-Ageing will be prevalent for transforming the country into an incumbent silver society in the next two decades (Sri-Chatrabimook, 2016).

Health is one of the most important issues affecting the elderly, and thus, it receives the most attention. As elderly people take more initiative to participate in their healthcare decisions, the ability to acquire effectively adequate health information support affects them as they seek to address or solve health problems. Given the prevalence of health information seeking behaviors and the trend toward patient involvement in healthcare, online/social media use behaviors and the online health information seeking could facilitate well-being and healthy life of the Thai elderly who are social media users or netizens is both necessary and timely (Miller & Bell, 2012).

Objectives

This research had two objectives as follows:

1. To describe online/social media use behaviors of the Thai elderly netizens users
2. To study the online health information seeking of the Thai elderly netizens

Conceptual Framework

Studies of health information seeking behaviors add greater specificity to the literature by considering how predisposing characteristics of individuals influence varied search practices. Scholars in different studies reviewed by Anker, Reinhart, & Feeley (2011) and found that the content of information sought varies based on sex, education, or age. Similarly, racial background has been explored with reference to trust in information channels, while health literacy has been found to influence channel selection. Such difference in access to information on the basis of socioeconomic factors is known as the digital divide. Health information seeking is more than merely engagement in a search for information, but involves complexities such as characteristics of the information seeker, the environment, context, current events, and the search process. Studies of health information seeking behaviors consider factors such as channels utilized for an information search, content of information sought, credibility of information obtained, self-efficacy to engage in the search process, or characteristics of the search process (e.g., time spent searching for information, number of sources consulted). In this study, selected factors were investigated to understand the elderly netizens online social media used and online health information seeking.

Research Methodology

This descriptive research on the Thai elderly who used social media was approved by the Research Ethics Committee of the Boromarajonani Nursing College, Saraburi. The details of research methodology were as follows.

A. Population and Sample

The population of this study comprised of 10,014,705 elderly who live in different regions in Thailand (National Statistical office, 2014). The sample was drawn using multistage sampling technique. Twelve provinces were randomly selected using simple random technique to represent each geographical region. The sample size and distribution was calculated based on proportion of the elderly in each selected province. The computer calculation package was used to calculate the sample size (http://www.nss.gov.au/nss/home.nsf/pages/Sample+size+calculator) with the confidence interval 95 % and relative standard error 2.0 % yield that the 2,200 elderly was required in this study. The convenience sampling was used to locate the sample who was aged 60 years and more. Among these respondents, there were 1,237 (56.23%) elderly who used social media. Thus the final sample size for this study was 1,237 elderly who used internet and social media.

B. Instrument and Measurement

Questionnaire was used to collect data in this study. It comprised of 3 sections of questions as follows.

Section I collected data on respondents' profile; domiciles, gender, education, marital status, income, source of income, age, and chronic diseases status.

Section II was designed to collect data on respondents' online media use behaviors which comprised of data on devices used to get online connection, time and frequency of using online media/social media, and level of online media uses according to media applications. To measure the level of use, the respondents had 5 options; never (0), 1-2 days (1), 3-4 days (2), 5-6 days (3), and every day (4).

Section III collected data on online health information seeking behaviors of the respondents. The questions were modified from the Health Information National Trends Survey (HINTS) measurement.

There were 8 questions asked to measure the level of use by health topics, the respondents had 4 options; regularly (3), occasionally (2), rarely (1), and N\never (0). The average mean scores were categories into 3 group of level of use as follows; low use = 0.00-1.00; moderate use = 1.01-2.00; and high use = 2.01-3.00, respectively. The reliability of this instrument was tested by Cronbaxh's alpha of 0.953.

C. Data Collection

The questionnaire was administered to the elderly who agreed to participate in this study. For those who had difficulty such as hearing impair or visual impair, the research assistants would use structure interview to assist them. These interviewers were trained to ensure the reliability of the data collection. The data was collected during the July to December 2016.

D. Data Analysis

Descriptive statistics, frequency distribution, percentage, mean and standard deviation, were used to calculate the data from the questionnaire. Tables and discussions were used to present the findings in three sections, demographical data; social media use behaviors and online health information seeking of the elderly social media users.

Research Findings

1. Demographic profile of the respondents

The proportion of the respondents were living in the central region (509, 41.1%), female (740, 59.8%), aged between 60 -69 years old (899, 72.7%) with a mean age of 66.92 years (SD = 5.53), elementary schoolers (349, 28.2%), married (781, 63.1%), had monthly income less than 5,000 baht (500, 40.4%) from the pension (330, 26.7%), and having chronic diseases (704, 56.9%).

2. Online Social Media Use Behaviors of the Elderly

2.1 Devices used to get online connection

It was found that most of respondents (932, 75.3%) used personal smart/mobile phone to get online connection followed by using the devices in the elderly centers in the neighborhood (258, 20.9%), and only 10 respondents (0.8) used computer and internet service providers.

Table 1 Devices used to get online connection of the respondents (N = 1237)

Devices	**n**	**%**
Personal smart /mobile phone	932	75.3
Notebook/Desktop at home	225	18.2
Elderly centers in the neighborhood	258	20.9
Computer and internet service providers	10	0.8

* choose more than one answer

2.2 Duration of time using internet/ online social media

Data in Table 2 revealed that majority of the elderly (517, 41.8%) use internet/online social media less than 1 hour a day, followed by three hundred and thirty three elderly (26.9%) used between 1-2 hour a day and only five elderly (0.4%) used internet for more than 10 hours a day, respectively.

Table 2 Duration of time using online social media of the respondents (n = 1237)

Average hour using online social media	n	%
1. Less than 1 hours/day	517	41.8
2. 1-2 hour/day	333	26.9
3. 3-4 hours/day	251	20.3
4 5-6 hours/day	78	6.3
5. 7-8 hours/day	40	3.2
6. 9-10 hours/day	13	1.1
7. More than 10 hours/day	5	0.4

2.3 Frequency of online media uses according to type of media/applications

It was found that the top five of online media used by respondents were Line (1,060, 85.7%), media clips (852, 68.9%), search engines (784, 63.3%), Facebook (781, 63.1), and webboard/bulletin (591, 47.8%). Most of participant used Line 1-2 days/week (441, 35.7%) followed by media clips everyday (355, 28.7), and Facebook 1-2 days/week (408, 33.0%) as shown in Table 3.

Table 3 Types of media/applications and frequency of uses by the respondents (n = 1,237)

Type of media/applications	Exposure per week					
	Never use	Use	Frequency			
			1-2 days	3-4 days	5-6 days	everyday
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Email	721 (58.3)	521 (41.7)	412 (33.3)	43 (3.5)	21 (1.7)	40 (3.2)
Line	177 (14.3)	1,060 (85.7)	441 (35.7)	129 (10.4)	80 (6.5)	410 (33.1)
Instagram	931 (75.3)	306 (24.7)	257 (20.8)	12 (1.0)	4 (0.3)	33 (2.7)
SocialCam	953 (77.0)	284 (23.0)	243 (19.6)	15 (1.2)	3 (0.2)	23 (1.9)
Twitter	947 (76.6)	290 (23.4)	248 (20.0)	16 (1.3)	4 (0.3)	22 (1.8)
Facebook	456 (36.9)	781 (63.1)	408 (33.0)	115 (9.3)	58 (4.7)	200 (16.2)
Blogs	846 (68.4)	391 (31.6)	309	40 (3.2)	10 (0.8)	32 (2.6)

			(25.0)			
Web Board e.g. Pantip, Dekdee, Sanook, etc.	646 (52.2)	591 (47.8)	413 (33.4)	74 (6.0)	32 (2.6)	72 (5.8)
Search for information and downloading	453 (36.6)	784 (63.4)	475 (38.4)	146 (11.8)	62 (5.0)	101 (8.2)
Watch media clip, listen to music	385 (31.1)	852 (68.9)	295 (23.8)	137 (11.1)	65 (5.3)	355 (28.7)
Play online game	857 (69.3)	380 (30.7)	322 (26.0)	25 (2.0)	6 (0.5)	27 (2.2)

2.4 Uses of the social media according to the respondents' demographical profiles

It was found that the profile pattern of the elderly in using different social media platform were similar. It was found that they were female in age range between 60 -69, received bachelor degree, earned monthly income less than 5,000 THB, married, and having chronic disease. Details were shown in Table 4

Table 4 Uses of Line, Media clips, search engines, Facebook, and Webboard/bulletin according to respondents' demographical profiles (n = 1,237)

Demographical profiles	**Line (n=1060)**	**Watch TV video clip (n=852)**	**Search for information and downloading (n=784)**	**Facebook (n=781)**	**Web Board e.g. Pantip, Dekdee, Sanook, etc (n=591)**
	N (%)	N (%)	N (%)	N (%)	N (%)
Gender					
Male	434 (87.32)	337 (67.81)	312 (62.78)	306 (61.57)	238 (47.89)
Female	626 (84.59)	515 (69.59)	472 (63.78)	475 (64.19)	353 (47.70)
Age (year)					
60 -69	807 (89.77)	621 (69.08)	591 (65.74)	599 (66.63)	447 (49.72)
70 -79	233 (78.45)	204 (68.69)	172 (57.91)	171 (57.58)	129 (43.43)
80-96	20 (48.78)	27 (65.85)	21 (51.22)	11 (21.83)	15 (36.59)
Education					

No schooler	185 (95.85)	181 (93.78)	177 (91.71)	176 (91.19)	176 (91.19)
Elementary school	235 (67.34)	219 (62.75)	160 (45.85)	152 (43.55)	112 (32.09)
High school	170 (85.43)	111(55.78)	105 (52.76)	105 (52.76)	52 (26.13)
Vocational certificate	60 (93.75)	27 (42.19)	30 (46.88)	35 (54.69)	18 (28.13)
Diploma	79 (94.05)	46 (54.76)	48 (57.14)	52 (61.90)	32 (38.10)
Bachelor	263 (94.60)	204 (73.38)	203 (73.02)	201 (72.30)	148 (53.24)
Higher than bachelor	68 (97.14)	64 (91.43)	61 (87.14)	60 (85.71)	53 (75.71)
Monthly Income					
<5,000	404 (80.80)	378 (75.60)	320 (64.00)	322 (64.40)	269 (53.80)
5,001 – 10,000	198 (90.00)	127 (57.73)	118 (53.64)	122 (55.45)	70 (31.82)
10,000 – 15,000	126 (88.73)	77 (54.23)	90 (63.38)	84 (59.15)	62 (43.66)
15,001 – 20,000	130 (94.89)	99 (72.26)	95 (69.34)	96 (70.07)	69 (50.36)
20,001- 30,000	86 (90.53)	80 (84.21)	74 (77.89)	69 (72.63)	59 (62.11)
30,001 and more	116 (81.12)	91 (63.64)	87 (60.84)	88 (61.54)	62 (43.36)
Marital Status					
Single	87 (91.58)	62 (65.26)	58 (61.05)	66 (69.47)	44 (46.32)
Married	679 (86.94)	553 (70.81)	504 (64.53)	493 (63.12)	380 (48.66)
Widower	237 (80.89)	194 (66.21)	178 (60.75)	182 (62.12)	138 (47.10)
Divorce	57 (83.82)	43 (63.24)	44 (64.71)	40 (58.82)	29 (42.65)
Having chronic disease					
No	469 (87.99)	354 (66.42)	326 (61.16)	347 (65.10)	244 (45.78
Yes	591 (83.95)	498 (70.74	458 (65.06)	434 (61.65)	347 (49.29)

2. Online health information seeking of the elderly

2*.1 Health-related information searched from the internet*

It was found that most of the respondent, 66.29%, used internet to search for health related information as seen in Table 5

Table 5 Online health information seeking of the respondent

Seek health information	N	%
Yes	820	66.29
No	417	33.71
Total	1237	100

Regarding the frequent of use internet to seek health information, it was found that the top three of contents regularly searched were healthy lifestyle (141, 17.2%), treatments (136, 16.6%), and medication (123, 15.0%); however, most of respondents never searched content about law regulations related to health condition (304, 37.1%) followed by patient organizations (284, 34.6%). When considered the level of contents searched from the internet found that respondents searched all types of contents at moderate level (mean = 1.30, SD=0.713). The highest mean score of the content searched was the treatment (mean = 1.58, SD= 0.898) followed by the healthy lifestyle (mean = 1.53, SD= 0.937) and medication (mean = 1.52, SD= 0.884) which all were at the moderate level as showed in Table 6.

Table 6 Health-related information seeking from the internet (n = 820)

Types of content searched	Regularly		Occasionally		Rarely		Never		Mean	SD	Level
	n	%	n	%	n	%	n	%			
1. Diseases	96	11.7	258	31.5	309	37.1	157	19.1	1.36	0.921	Moderate
2. Healthy lifestyle	141	17.2	267	32.6	296	36.1	116	14.1	1.53	0.937	Moderate
3. Medication	123	15.0	274	33.4	328	40.0	95	11.6	1.52	0.884	Moderate
4. Treatments	136	16.6	295	36.0	295	36.0	94	11.5	1.58	0.898	Moderate
5. Care providers	106	12.9	239	29.1	318	38.8	157	19.1	1.36	0.934	Moderate
6. Patient organizations	56	6.8	174	21.2	306	37.3	284	34.6	1.00	0.913	Low
7. Law regulations related to health conditions	55	6.7	157	19.1	304	37.1	304	37.1	0.95	0.911	Low
8. Peer-support forums	73	8.9	178	21.7	301	36.7	268	32.7	1.07	0.947	Moderate
Total									1.30	0.713	Moderate

*Level: Low = 0.00-1.00; Moderate = 1.01-2.00; High = 2.01-3.00

2. 2 Opinion towards health information seeking behaviors

In Table 7, the respondents reported the highest average mean score on it's hard to know which ones to follow (mean=1.88 (SD = 0.825) followed by the frustration during they searched for information (mean=1.78, SD= 0.830) and it is hard to understand information, and hard to follow information (mean -1.75, SD = 0.824) which all means were at low level, respectively.

Table 7 Health information seeking behaviors and trust of health information sources

Trust of health Information Items	Mean	SD	Level
Based on your most recent search for information about health and medical topics, how much do you agree or disagree to the following statements?			
1. You felt frustrated during your search for the information.	1.78	0.830	Low
2. The information you found was hard to understand	1.75	0.824	Low
3. There are so many different recommendations about preventing cancer; it's hard to know which ones to follow.	1.88	0.825	Low

*Level: Low = 1.00-2.00; Moderate = 2.01-3.00; High = 3.01-4.00

Summary and Discussion

The findings could be summarized and discussed as follows.

1. Online Social Media Use Behaviors of the Elderly

The elderly respondent in this study were internet citizen who use social media daily. The time spent in using the internet is relatively long for their age, there were group of respondent who used internet/social media within the 1-4 hours range (26.9% used between 1-2 hour a day, and 20.3% used 3-4 hours a day) although 26.9% used less than 1 hour a day. This is considerable light users comparing to national average use of 9.38 hours/day (Southeast Asia digital, social and mobile, 2018, https://aseanup.com/southeast-asia-digital-social-mobile/). It was also found in Rattanawarang (2015) that elderly use internet for health information for 1-2 hours a time and a couple of times a week. Most of respondents (75.3%) used personal smart/mobile phone to get online connection. Mobile phones are rapidly becoming a feature of today's society which is the convenient to the elderly also (Kurniawan, 2008). At a present, the smartphone is developed to be easy to use, user friendly and not expensive; as a result, the smart/mobile phone is not too complicated for the elderly.

These findings were not a surprise as the majority of the respondents were the early old adult age between 60-69 years (72.7%) presumably whose functionality is still at good level. The older adult with aged level 60-69 year (the young-old) is the beginning of old age started to have sickness by their age but there have cognation and ability still maintained their self-care. Likewise, about 58% being literate person (graduated from senior high school and above) make the respondent eligible to use internet/social media.

Looking into types of internet/social media used, it was found that the top five of online media used by respondents were Line (85.7%), media clips (68.9%), search information and downloading (63.3%), Facebook (63.1%), and webboard/bulletin (47.8%). For daily use, it was found that the respondents used Line (32.1%), watch media clip or listen to music (28.7%), and Facebook (16.2%),

respectively. The finding was in consistent to the national social media usage pattern where Facebook is most used among the social network and Line is the most used among messenger/char/VOIP applications among Thai people (75% and 68%), respectively. Study conducted by Chaichuay (2017) revealed that Line became a part of Thai elderly people's daily life due to its advantages and usefulness. Line provide Virtual Space capability which enable them to interact with friends and relatives without the limitation of times and places and it is an effective mean to shown their anxiety to others and implication their well-being via "Good Morning" photos (Somvatsawan & Satraruji, 2017).

Further analysis of the distribution of top five online/social media reportedly use by most of the respondents revealed that most of female used Line, media clips, search engines, Facebook, and webboard/bulletin more than male. It was also found that most of respondents of every education level, monthly income level, and marital status used Line higher than other online media/social media. In addition, respondents having chronic diseases and sources of income from pensioners also reported that they used line more than other media/social networks and female older adults in the young-old (60-69) was majority group which use online health information. The finding indicated that the Thai elderly netizens are the active communicators who actively used online media to get their needed information, getting engaged to the world, and finding relaxation despite having decreasing functionality. The age-related changes such as visual impairment and cognitive decline which are barrier for use online and social media seem not to be a problem among the respondents. However, the lesser use of social media was evidently decline when people getting older where health problem from disease such as stroke and dementia are barrier for use online and social media especially in the very old age (Loipha, 2014).

2. Online health information seeking of the elderly

2.1 Health-related information searched from the internet

Health information seeking is often initiated in response to a health problem or health related anxiety (Lagoe & Atkin, 2015) and use is likely to increase as people with high-speed Internet connections do a lot of health-related searches. People searched health information from the internet because of its anonymity, convenience and quantity of information (Powell, Darvell & Gray, 2003). In this study, it was found that the top three of contents regularly searched from the internet were healthy lifestyle (11.4%), treatments (11.0%), and medication (9.9%) although these contents were searched at the low level. The search for information about healthy lifestyle covers diet, fitness, and exercise suggesting that the respondents were interested more in health information that could be unrelated to particular symptoms or disease condition although search for a current disease diagnosis and treatment were also reported. The findings were consistent with the Pew researchers (Weaver

2018) who found that most frequently American people went online to look up information about a specific disease or medical problem (63 percent) or a particular medical treatment or procedure (47 percent). They were also interested in diet, nutrition and vitamins (44 percent) and exercise or fitness information (36 percent).

Furthermore, it was found that the online media namely line, media clip, search for information and downloading, Facebook was predominantly used when searching for information on healthy lifestyle (11.4%), treatments (11.0%), and medication (9.9%) among the respondents. Variety of content searched serves varieties of reasons, including (1) reassurance, (2) to reduce uncertainty, or (3) to help reconcile them with a new health situation (Zhang, Sun, & Xie, 2015), and usually related to their own health or health care (Flynn, Smith, & Freese, 2006). As lower levels of educational attainment are often associated with reduced levels of health literacy in this study the educational level is not barrier for searching online health information as there were more number of respondents who were a high school graduates or higher. New devices, particularly smart / mobile phones, come in response to users with disabilities and unreadable. Therefore, older adults can learn to use them by remembering and practicing their skills without the need for higher education.

Similarly, Ashley E. Anker, Amber Marie Reinhart and Thomas Hugh Feeley (2011) indicated that to study health information seeking behaviors factors such as channels utilized for an information search, content of information sought, credibility of information obtained, self-efficacy to engage in the search process, or characteristics of the search process should be considered together. It should be noted that the content that involved further interpersonal communication such as care providers and patient organizations were less searched for.

The finding indicated the need to have a healthy lifestyle among the Thai elderly social media users but less awareness about the law and regulations about healthcare or the reference group such as care providers and patient organizations. These two channels could provide an excellent medium for social interaction among patients who shared similar background and health concerns through online support groups. Studies that explored the provision of social support within these online groups and found informational and emotional support were most frequently exchanged in the group and the use of online support groups is found to be associated with positive outcomes, including better mental health, better quality of life, and higher level of optimism, and more use of active coping strategies (Po, 2012). The greater use of the Internet as a communication tool was associated with a lower level of social loneliness (Sum, Mathews, Hughes & Campbell, 2008) and a self-reliant approach use (Hall, Bernhardt & Dodd, 2015).

2. 2 Opinion towards health information seeking behaviors and trust of health information sources

Although doubts have been raised about the quality, accuracy, reliability and veracity of various online health information resources, the mega number of information provided in the internet allow the users to have enormous choices to select. The respondents reported their seeking behavior as it's hard to know which ones to follow, frustrating during they searched for information and it is hard to understand information which all means were at low level. It can be implicated that the respondents may have relatively good eHealth literacy. Much research has identified an association between eHealth literacy and an individual's motivation to engage with online health information seeking. Those with high levels of eHealth literacy have been identified as more frequent health information seekers (Britt & Hatten, 2013), and more likely to scrutinize the accuracy of information and the reliability of an information source when compared with a lower eHealth literacy group (Neter & Brainin, 2012).

As far as the sources of information from the traditional media are concerned it was found that the respondent had highest mean score on trust information about health or medical topics from television followed by from newspaper and magazines and the least mean score on radio. This is not a surprise finding despite being the netizen, these respondents still use other media channel as national statistics indicated that TV was still watched by 98% of the Thai, which include the elderly (https://aseanup.com/southeast-asia-digital-social-mobile/). Also, it was reported that the search for relevant health and disease related information is not well established (Stoevesandt & Diez, 2006) but gradually increase its important as a healthcare information sources (Mo, 2012).

However, the conclusion of the trust of the traditional media in this study was an implication from the findings available as there was no direct question asks to compare the credibility of traditional media and internet. Digital health information usually uses short message service/text messaging, social media, and internet technology. Although exposure to these products is becoming ubiquitous, electronic health information is novel, incompletely disseminated, and frequently inaccurate, which decreases public trust. A study from YouGov (Marketing Charts, 2016) indicated that Americans are more likely to trust news that they read about in the newspaper or see on TV than they are to trust what they read online. It was found that trust in social media was low and trust in interpersonal health information sources was higher than in media sources (Brown-Boeckman, White, Burbank, Paulson, & Beebe, 2018).

Suggestions

1. As it was found that Line, Watch media clip, listen to music, and Facebook were used every day by most of the respondents' therefore healthcare providers in planning for health promotion interventions, should consider using these channels appropriately to provide healthcare information to the elderly netizens. Outreach program should be established to get those whose functionalities are

still in good conditions to learn how to use their mobiles for health information, increase their self-efficacy to engage in the search process, or characteristics of the search process better and to increase their health and eHealth literacy. This is in line with the e-Ageing and the elderly's ICT literacy promotion emphasized in the Thailand's national ICT plan

2. Health information seeking is more than merely engagement in a search for information, but involves complexities such as characteristics of the information seeker, the context, the search process, content of information sought, credibility of information obtained, etc. Thus, relationship among these factors should be further measured among the elderly group. Comparison of health information seeking behavior from different devices could shed light into more effective accession to health information.

3. As the finding about the contents less sought from the internet indicate lesser use of patient organizations and peer-support forums, the health care provider organizations and social welfare for the elderly group could coordinate in promoting the use of these sources. Directory of these websites and contacts the owner of those forums and organizations within the areas and nearby to setup activities to promote the websites to the elderly groups. The quality peer-supports forum could energize the elderly netizens.

4. Law regulations related to health conditions is also less sought whereas this topic is important to people, sick or not sick, as it effect the people's quality of life and well-being, information center or health care organization authority should actively disseminate health care law and regulation and related topic to the elderly netizens regularly. Web board and Facebook could be the channels as these platforms are most used among the elderly netizens.

Acknowledgement

Data in this research was selected from the research project entitled "The eHealth Literacy of the Elderly in Thailand" which was supported by the Boromarajonani College of Nursing Saraburi. This article's contents are solely the responsibility of the authors and do not necessarily represent the official view of the Boromarajonani College of Nursing Saraburi.

References

Anker, A.E., Reinhart, A.M., & Feeley, T.H. (2011). Health information seeking: A review of measures and methods. *Patient Education and Counseling. 82*, 346-354. doi:10.1016/j.pec.2010.12.008.

Britt, R.K. & Hatten, K.N. (2013) Need for Cognition and Electronic Health Literacy and Subsequent Information Seeking Behaviors Among University Undergraduate Students. *SAGE Open* (October-December), 1–10. https://doi.org/10.1177/2158244013508957

Brown-Johnson, C. G., Boeckman, L. M., White, A. H., Burbank, A. D., Paulson, S., & Beebe, L. A. (2018). Trust in health information sources: Survey analysis of variation by sociodemographic and tobacco use status in Oklahoma. *JMIR public health and surveillance,* 4(1), e8. doi:10.2196/publichealth.6260

Chaichuay, W. (2017). Elderlies' experience in using LINE application: A phenomenological study. *Veridian E-Journal,* 10 (1), 905-918.

Chaudhuri, S., Le, T., White, C, Thompson, H., & Demiris, G. (2013). Examining health information–seeking behaviors of older adults. *Comput Inform Nurs, 31*(11), 547–553. doi: 10.1097/01.NCN.0000432131.92020.42

Flynn, K.E., Smith, M.A., & Freese, J. (2006). When do older adults turn to the internet for health information? Findings from the Wisconsin longitudinal study. *Journal of General Internal Medicine, 21*(12),1295–1301.

Hall, A. K. P., Bernhardt, J. M., & Dodd, V. (2015). Older adults use of online and offline sources of health information and constructs of reliance and self-efficacy for medical decision making. *J Health Commun*, 20(7), 751–758. doi:10.1080/10810730.2015.1018603.

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Ulilization of mass communication by the individual. In J. G. Blumler, & E. Katz (Eds.), The uses of mass communications: Current perspectives on gratifications research (pp. 19–32). Beverly Hills: Sage.

Kurniawan. S. (2008). Older people and mobile phones: A multi-method investigation. *Int. J. Human-Computer Studies. 66*, 889–901.

Lagoe, C. & Atkin, D. (2015). Health anxiety in the digital age. *Computers in Human Behavior Archive, 52*, 484-491.

Loipha, S. (2014). Thai elderly behavior of Internet use. *Procedia - Social and Behavioral Sciences,* 147, 104 –110

Marketing Charts. (2016). *Newspaper and TV news trusted more than online sources*. Retrieved from https://www.marketingcharts.com/industries/media-and-entertainment-73327.

Mo, P. (2012). The Use of Internet for Health Education. *J Biosafety Health Educ* 1:e102. doi:10.4172/2332-0893.1000e102.

Miller, L.M., & Bell, R.A. (2012). Online health information seeking: the influence of age, information trustworthiness, and search challenges. *Journal of Aging and Health, 24(3),* 525-541. *doi: 10.1177/0898264311428167. Epub 2011, Dec 20.*

Neter, E. & Brainin, E. (2012). eHealth literacy: extending the digital divide to the realm of health information. *J Med Internet Res.*, 27, 14 (1), e19. doi: 10.2196/jmir.1619.

NIDA Poll. (2017) Quality of life: Environment friendly to the older adults in Thailand 2017. Retrieved from: http://nidapoll.nida.ac.th/index.php?op=polls-detail&id=527.

National Statistical office. (2014). *The 2014 survey of the older persons in Thailand*. Bangkok: Text and Jurnal Pblication Co.,Ltd.

Powell, J. A., Darvell, M., & Gray, J. A. (2003). The doctor, the patient and the world-wide web: how the internet is changing healthcare. *Journal of the Royal Society of Medicine*, *96*(2), 74-76.

Quinn, S., Bond, R. & Nugent, C. (2017). Quantifying health literacy and eHealth literacy using existing instruments and browser-based software for tracking online health information seeking behavior. *Computers in Human Behavior*, *69,* 256-267. http://dx.doi.org/10.1016/j.chb.2016.12.032

Rattanawarang, W (2015). Elderly's Internet Usage for Health Information in Bangkok Region. *Journal of Behavioral Science for Development*, 7, 1, 169-185.

Somvatsawan, K. & Satraruji, K. (2016). The study of communication behavior in Line Application data sharing of elderly people [online]. Retrieved from: http://gscm.nida.ac.th/gscmconference/images/Proceeding/2559/2.pdf [23 October 2018]

Stoevesandt, D., & Diez, C. (2006). Is the Internet a useful and relevant source for health and health care information retrieval for German cardiothoracic patients? First results from a prospective survey among 255 patients at a German cardiothoracic surgical clinic. *Journal of Cardiothoracic Surgery*, *1*(36). 1-15. doi:10.1186/1749-8090-1-36.

Southeast Asia digital, social and mobile 2018. Retrieved from https://aseanup.com/southeast-asia-digital-social-mobile/

Sri-Chatrabimook, S. (2016). Strategies to develop quality of life and learning of the handicap, elderly and the needy person in the convergence era. Bangkok: Institute for Research and Consultancy of the Thammasart University.

Sum, S. Mathews, R.M., Hughes, I., & Campbell, A. (2008). Internet use and loneliness in older adults. *Cyberpsychology & Behavior*, *11*(2), 208-211. doi: 10.1089/cpb.2007.0010.

Sunkpho, J. & Khaemasunun, P. & Tubtimhin, J. (2014). Thailand new ICT master plan to promote ICT innovations and services for e-Ageing. Paper presented at the 8th International Conference on Theory and Practice of Electronic Governance, At Guimarães, Portugal. DOI: 10.1145/2691195.2691310.

Tayati, P., Disathaporn, C, & Onming, R. (2017).The model of Thai elderly learning management for information and communication technology literacy. *Veridian E-Journal, Silpakorn University*. 10(3), 1456-1471.

Thailand's National Bureau of Statistics [online]. Available from: http://service.nso.go.th/nso/nsopublish/citizen/news/ [23 October 2018]

Van Boekel, L. C., Peek, S., & Luijkx, K.G. (2017). Diversity in older adults' use of the internet: identifying subgroups through latent class analysis. *Journal of medical Internet research*, *19*(5), e180. doi:10.2196/jmir.6853.

Weaver, J. (2018). More people search for health online but they often can't find what they're looking for, the study find. *Telemedicine on NBC News.* Retrieved from http://www.nbcnews. com/id/3077086/t/more-people-search-health-online/#.W-TRgNIzbIU

Williamson, A. (2013). Social media guidelines for parliaments [online]. Retrieved from: http://www.ipu.org/PDF/publications/SMG2013EN.pdf [23 October 2018]

Xie, B. (2009). Older Adults' Health Information Wants in the Internet Age: Implications for Patient–Provider Relationships. *Journal of Health Communication,* 14:510–524, 2009. DOI: 10.1080/10810730903089614.

YouGov. (2016). https://d25d2506sfb94s.cloudfront.net/cumulus_uploads/ document/ts3vu9dr11/ tabs_OP_Fake_News_20161209.pdf

Zickuhr, K. & Madden, M. (2012). Older adults and internet use. Retrieved from: https://www.sainetz.at/dokumente/studien/Older_adults_and_internet_use_2012.pdf

.